

**METHOD AND APPARATUS FOR CONDUCTING COINLESS  
TRANSACTIONS**

**Abstract of the Disclosure**

5           A method and apparatus are disclosed for facilitating coinless transactions by rounding a fractional transaction cost up or down to a whole-unit amount. A fractional transaction cost is rounded up or down to a whole-unit amount based on a generated random number that ensures fairness to both buyers and sellers, over time. If a transaction purchase price is  $N.C$  units, where  $N$  is any non-negative integer and  $p$  is an integer between 0 and 99 indicating the fractional cost between 0 and .99, with  $p$  equal to  $C/100$ , then a buyer will be charged  $N+1$  units with a probability of  $p$ , and  $N$  units with a probability of  $1-p$ . The random number generation process can ensure that the rounding process does not favor buyers or sellers, for example, by (i) incorporating a buyer-provided offset that guarantees, or (ii) having the generation of the random number 10 performed or supervised by a trusted third party. The buyer can also increase his or her odds of having the final purchase price rounded down by exposing more than just the amount by which the rounded up cost exceeds the fractional cost. Thus, if a transaction purchase price is  $N.C$  units, with  $p$  equal to  $C/100$ , where  $N$  is any non-negative integer and  $C$  is an integer between 0 and 99 indicating the fractional cost between 0 and .99, and 15 the buyer tenders an amount of  $X$  units, where  $X$  is greater than  $N$ , then a buyer will be charged  $X$  units with a probability of  $(N + p) / X$  and zero units with a probability of  $1 - ((N + p) / X)$ .

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